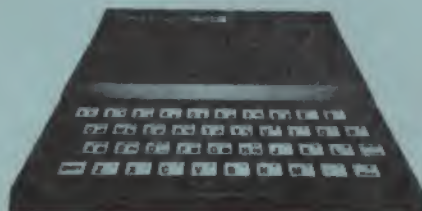


SYNCHRO—SETTE

THE SUBSCRIPTION MAGAZINE FOR YOUR MICRO COMPUTER
TIMEX — SINCLAIR

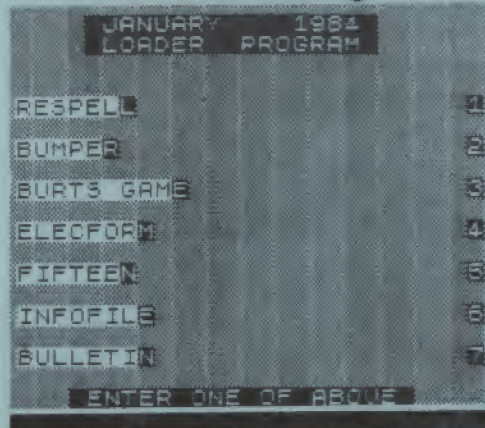


VOLUME 3 - NUMBER 1 - JANUARY 1984 - CASSETTE ISSUE - \$10.00

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This Month's Programs



There are 7 programs on this month's cassette, not counting the LOADER program.

The program names are as they appear on the above menu, which is similar to what will appear on the screen when the LOADER program is running.

Each program is recorded only once on each side of the cassette. The first programs that can be LOADED will be of the small size followed by the larger sized programs. The other side of the cassette is a duplicate of the first side.

For you new subscribers who aren't familiar with LOADING procedures for cassette programs, follow these directions:

A - Make sure that the volume

setting of the recorder is set at about 80 % maximum.

B - If you have a Bass and/or Treble control on the recorder, make sure the Treble is at maximum and the Bass is at minimum.

C - To LOAD the first program, type in LOAD "" and press the ENTER key on the computer. Then press the PLAY button of the recorder. The lead time on the NOV/83 cassette is about 10 seconds until the first program begins.

The time needed to load the LOADER program is 1 minute & 40 seconds. When the program is loaded, a list of this month's programs will appear automatically.

Shut off the recorder when the LOADER program is loaded. Any of the listed programs can now be loaded into the computer by pressing the appropriate number on the keyboard and then pressing the PLAY key on the recorder. The loader program loads by searching for the name of the program you want and ignoring any of the other programs it may encounter along the way.

If you want to go directly to a program without waiting, we suggest you first find the tape location of the beginning of each of the programs with your recorder counter. This can be done as you go through

the programs the first time, noting the tape location on the counter as each one is being loaded.

If you don't have a counter, approximate the tape position with the fast forward key just before where the program would start, and then LOAD the program with the name of the program using the format LOAD "NAME OF PROGRAM".

Some of our subscribers have told us that they could not get the programs to load by name but they would load with the double quotes. Others have told us that the loader program wouldn't load certain programs. Most have told us that all the programs could be loaded either way. Every customer's cassette is made from the same master tape, so the programs on everyone's cassettes are identical. We feel it is most probably a problem of volume adjustment or recorder design. We have noticed this situation on some of our recorders.

PROGRAMS (all programs this month are self-running
- program's name has inverse last character if self-running
RT = run time/LT = load time)

There is an approximate 7 to 20 second pause between programs

"RESPELL" LT = :31 30-44

Here is a routine that emulates the string search and replace routine used in many word processors. Enter a sentence or paragraph of text and then enter a word you want changed.

Enter what you want the word to be changed to and the new text will be displayed.

"BUMPER" LT = :50 46-66

A fascinating game of skill where the player tries to remove all the graphic stars by striking them with his moving squot. The game is over if the squot strikes the border at the edge of the screen.

The game starts after the screen fills with stars by pressing the down-arrow key. The arrow keys control the direction of the squot. A final score is displayed.

"BURTS GAME" LT = 1:25 67-98

The game of Baccarat! The game starts with you and the bank having \$100,000. \$10,000 is the maximum bet. After placing your bet, the computer will deal two cards each to you and the bank. Your cards will be both face up. The bank will have one up and the other down.

The object of the game is to get nine or as close to nine as possible. Aces are counted as 1, Court cards and 10 as 0 and the other number cards as their value. If the total of the cards exceed 9, 10 will be subtracted from their value.

You and the bank have the option to be dealt one additional card if needed. A draw cycles to the next hand.

The program has a routine that simulates actual cards being removed from the deck so that if you can keep track of the cards dealt, you can determine what cards are left.

99-139

"ELECFORM" LT = 2:01

This program will find use for students and electrical engineers. Conversion routines for OHM's Law, Watts, Reactance, Inductance and Impedance are all included.

"FIFTEEN" LT = 1:28

140-108

The old fifteen game most of us have had as a child. Remember the little plastic square with the movable letters?

Use the arrow keys to re-position the letters in forward order. You have the option of

- STRAIGHT - letters in order to be moved one space to the left.

- REVERSE - letters backward

- RANDOM

The computer keeps track of your moves and it may take over 1000 moves to complete the game.

169-206

"INFOFILE" LT = 2:09

This is a data-base program designed to store information regarding topics of interest found in magazine articles. Data is entered in three fields per item: publication name, date & page number and the necessary text to describe the article.

Two powerful routines are included - a keyword search to locate the data and a word processor editing routine.

The program puts all the data into a single string. There is no dimensionalizing at all. The keyword search scans the string and pulls out the necessary data block. If the block is incorrect, it will continue the scan and repeat the process.

In the editing mode, only the text has the word processing mode with the text displayed on the screen and a blinking cursor over the first character. The control codes.

SINCLAIR'S 'QUANTUM LEAP' IN THE U.S.



Uncle Clive has dropped another bomb on the computer industry. Just as we are being introduced to the TS-2068, Sinclair research announced they will ship a new microcomputer, the Sinclair QL (which stands for Quantum Leap), to the American market beginning this fall.

This is the fabled computer announced in our magazine about a year ago as the ZX-83.

Here are some of the specifics, as we understand them:

- Motorola 68008 32 bit microprocessor
- 65 dome recessed keys
- 128K RAM, expandable to 512K
- 85 character columns by 25 lines with monitor
- 40-60 columns by 25 lines with TV
- Two 100 K microdrives onboard
- 32K ROM

- Cartridge port for 64K ROM cartridges
- 4 color Hi-Res 512x256 screen output
- 8 color 256x256 Lo-Res screen output
- Sinclair SUPERBASIC onboard
- Multi-screen (up to 6 windows)
- Multi-program/tasking (allows computer to have in memory more than one program and operate more than one program or sections of a program at a time in various windows).

The computer will come with 4 BASIC programs. They are:

- Word processor
- Spread sheet
- Graphics package
- Management data base

The last one has its own screen editor. Peripherals under development are:

- Pascal compiler
- 68000 assembler
- Terminal emulator
- Analog/digital interface
- Winchester disk interface
- Parallel printer interface
- Multi-channel sound generator
- 80 column ink printer
- 512 K memory board

It is interesting that Sinclair plans to market this computer by mail-order and through Sinclair Research, not through Timex. Apparently Sinclair is dissatisfied with the marketing methods of Timex

Editor



Ramblings

TS SALES

are far below expectations! One source has it that less than 30,000 units of the TS-2068 have been sold since its introduction in late 1983. About the same amount of TS-1500s were manufactured. Compare that with TS-1000 sales about a year ago and you'll find the ratio about 10 to 1.

Some suppliers have said that Timex isn't shipping the amounts of 2068s that were ordered and most orders were short.

This can have the effect of creating an artificial demand as consumers are being told that the computers are on back order.

I am not aware of anyone who has received any of the peripherals, other than the 2040 printer. The 1-800-24 TIMEX is constantly busy.

TS-1500 QUALITY CONTROL

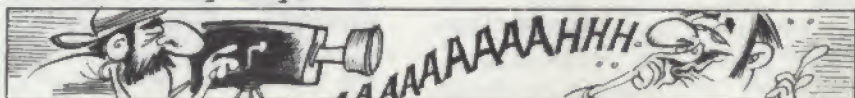
One short note regarding the 1500 - programs saved on tape from the 1500 seem to receive an extremely strong signal with much less noise than the 16K ZX-81s or TS-1000s. The detachable rampacks were the culprits for many of you who have difficulty trying to re-load programs that were saved by your own computer. The quality of the 1500 sound pulse output to tape seems to be better than any 1000/rampack combination I've used, including Memotech, which was the best.

I have had problems trying to load programs made with the 1500 back into the 1000 though.

CHEAPEST 1000S?

With rampack, 29.95 almost anywhere they're sold. \$24.95 was a liquidation price at a couple of stores in our area and rumor has it that one store was selling out the stock for \$9.95 with rampack.

If stores can sell them that cheap, what are they paying for them?



The first motion picture copyrighted in the United States in 1894 showed a man in the act of sneezing.

Remember, Timex is contracted to Uncle Clive for a 5% royalty. When they sold for \$150.00 with rampack last year, Sinclair got \$7.50 on each one sold (if his royalty was figured on the consumer price). Now he has to settle for less than a buck and a half.

I wouldn't be suprised if Sinclair severed relations with Timex very very soon. The QL (see article this issue) is the first step.

ADAM PROBLEMS

Just to keep you abreast of other news in the microcomputer world, we've been told Coleco's Adam is experiencing a very high return rate. I have yet to talk to anyone who has one and was satisfied with the product.

It's a shame because it offered more for the money than any of the competition when announced - 80K computer, letter quality daisy wheel printer, word processor, high speed tape drives and game package for under \$600.00. The QL offers more for more than \$100 less.

I hope Coleco can overcome these setbacks, but I don't think they will in time.

NO NEWS ISN'T GOOD NEWS

About Timex's peripherils - the market moves so fast and the consumer tires of waiting. Timex has a very tight-lipped information service to the public. Queries about the announcements made at the CES show in June 83 regarding add-on items for the 1000, 1500 and 2068 have been met with replies of little or no information. What's happening? Will the modem ever see daylight? What about the much heralded micro-drives?

Timex advertises them in their Ramblings publication but people I have spoke to who have ordered items have been told there would be a waiting period before delivery on many of them.

The 2068, in my opinion, is the best computer for the money! The quality control of it and the 1500 far surpass the 1000 - but if it doesn't get support soon, in both market exposure and peripheril support, Timex will lose, and lose big!



In the twenty-first century farmers may be using computer robots to do much of the work.

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CASSETTES

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BIG CHAR EXAM	SEP	UTILITY
BULLETIN	ALL CASSETTES	BULLETIN BOARD
CARDTRICK	NOV	GAME DEMO
CENSUS	NOV	GENERAL
DEPOSIT MULTIPLIER	JUN/JUL	BUS
DROPTTEST	NOV	MATH
GRAFIT	APR	BUSINESS
GRAN MARQUEE	JUN/JUL	SPECIAL EFFECTS
GUESS IT	APR	GAME
INVERSCROLL	FEB	SPECIAL EFFECTS
LABYRINTH-2	SEP	GAME
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STOCK PROJECTOR	SEP	BUSINESS
STUMPER	NOV	GAME
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THE COMPUTER TUTOR

ISS/PG	TITLE	DESCRIPTION
JAN/8	SIMULATING PRINT USING	Number formatting
FEB/15	DETERMINING PROGRAM SIZE	Utility
MAR/10	READ/DATA/RESTORE REVISITED	Data manipulation
APR/12	LINE RENUMBERING	Utility
MAY/5	MACHINE LANGUAGE	Reverse scroll
JUN/11	SCREEN MEMORY MAP PT. 1	Utility
AUG/7	SCREEN MEMORY MAP PT. 2	Utility
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DEC/4	DATA SEPARATION PT. 2	Merging data

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 Hardware Review

Other product announcements and reviews are too numerous to list and appear in the Editor Ramblings column.

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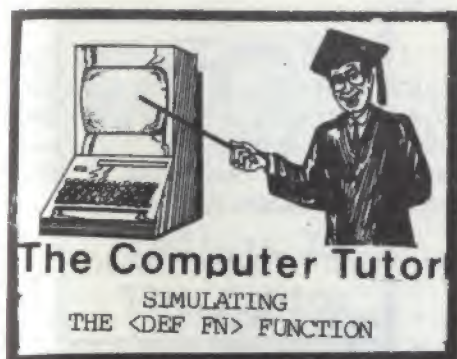
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Good morning Class! I'm wondering if the poor attendance is due to these late season snow storms or the phasing out of the TS-1000. Oh, well - today's lesson will be on simulating the <DEF FN> or Define Function. This is a powerful programming tool that is poorly promoted and even less understood.

On many other computers, you will find this function wherever mathematical formulae need to be repeated. An example of a routine using <DEF FN> might be:

```
10 DFN A(X) = 17*(18.5 - X/5)
20 PRINT FNA(12)
```

The result of RUNNING these 2 lines would be 273.7. This function, of course, could easily be written with a BASIC routine as follows:

```
10 INPUT X
20 GOSUB 1000
30 PRINT Y
40 STOP
1000 Y = 17*(18.5 - X/5)
1010 RETURN
```

For most purposes, this is easy to understand and works quite nicely. But there is a more memory efficient method. Enter the following program into your computer.

```
10 LET A$ = "17*(18.5 - X/5)"
20 INPUT X
30 PRINT VAL A$
```

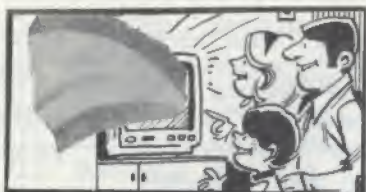
Look at the advantages of this technique! We never have to access a subroutine. Enter line "40 GOTO 20" and the program recycles where we can enter different values and get the proper results each time.

The purpose of <DEF FN> is to define a function or formula where variables may keep changing but the formula that uses these variables stays intact. The TS-1000 actually has the capability to define more complex formulae than the <DEF FN> function can because formulae can be custom designed to include additional variables and be much longer.

Once the string variable (A\$ in our example) has been defined, we never need encounter that program line again. Simply finding the value of that string will do the job.

A short lesson today, but one that could have important repercussions in your future programs.

Class dismissed!



COLOR OUTPUT OF THE TS-2068

Many people have contacted me regarding the color contrast of the TS-2068. The most common complaint was that the colors do not correspond with the key codes.

We hooked up the 2068 to a Commodore 1702 monitor and found this to be true if the knob controls are set at normal. The knobs snap into position when turned; that the manufacturer deems to be the proper setting. At this setting, and using the color programs on page 176 of the manual, the colors appeared as follows:

Key color	Actual color
0 - BLACK	BLACK
1 - BLUE	BLUE/BLACK
2 - RED	PURPLE
3 - MAGENTA	BLUE
4 - GREEN	BROWN
5 - CYAN	LIGHT GREEN
6 - YELLOW	PINK

Not too good as black and blue were the only two that came close, unless you want to count cyan (I don't even know what cyan is supposed to look

like).

I then tried adjusting the color controls and found that the best results occurred when the TINT knob was turned completely clockwise. The colors were now as follows:

Key color	Actual color
0 - BLACK	BLACK
1 - BLUE	DARK BLUE
2 - RED	RED
3 - MAGENTA	PURPLE
4 - GREEN	GREEN
5 - CYAN	LIGHT BLUE GREEN
6 - YELLOW	TAN

Well, 4 out of 7 ain't bad, is it? The others I can live with. They were pretty close. I noticed that pretty much the same effect occurred on a hi-res color monitor I tried different 2068 on a couple months ago, so I guess that this off-shade color problem is universal.

The BRIGHT and OVER commands are pretty nice, also. BRIGHT enhances the color effect and OVER will allow two differently colored characters to occupy the same screen space - a nice effect for moving graphics. The OVER command can also be used to overlay any number of characters into the same screen position. Combinations can be used to easily create custom characters.

FLASH is a command that allows a group of characters



Letters To The Editor

Dear Ed,

I Want to get on line and crow about my new Timex 2068. Frankly, I was considering a Commodore 64 which goes for about \$199, but when you throw in \$60 for the recorder, the difference of about \$120 made the difference for me.

Personally, I think the 2068 is a better machine, providing Timex can come across with some good software and other software makers join in.

I do wish that the 2068 had a 40 line format. The new key system was not difficult to learn but I lost a program by inadvertently hitting the on/off switch while trying to move the machine to a more comfortable position. While the new key system is easy to learn, it is hard to break old habits. I also lost a program by using the shift key on the right (per the 1000 BREAK key) and then the "A" key. What I got was "NEW".

Still, the 2068 will beat

the pants off the 64 and force another price cut in that product.

R. J. Cunningham
S. Ozone Park, NY

Dear Ed,

I was really sad to hear about the discontinuation of your magazine. I'm going to miss it.

As you can see from the printout, I now have my own 2068. I had to start teaching computer programming classes and performing lectures on computing in order to make enough money to afford the computer. I even made enough money to buy a printer. I must say that it is the best investment I have ever made. I can't wait for the micro-drives to come out.

Here are a few tips you might want to pass on to your readers about the 2068!

- A short sound from the BEEP channel can be programmed for the pressing of any key by entering:

POKE 23609,100

The BEEP command has a very wide range of sounds but it is sometimes hard to hear. What you need is an amplifier and if you have a tape recorder, you have all you need.

Take out any tape that might be in the recorder, turn the volume up as loud as it will go, and unplug the ear jack. Now push the play button and you will have an amplifier for the BEEP channel.

Also, try the following programs:

```
10 PRINT #1;"This is printed
in the
lower part of the
screen":PAUSE 0
```

or

```
10 INPUT AT 10,10;"enter"
```

I'm sure there are lots of others. I'm really looking forward to your new software for the 2068.

Sincerely,
Charlie Day
Charlotte, NC

Dear Ed,

The following 9 lines can replace lines 10 to 570 (of the Christmas program /December-83 Synchro-sette, 2068 version) and will be much easier to input:

```
10 FOR a=USR "a" TO USR
   "f"+7
20 READ user: POKE a,
   user
30 NEXT a
40 DATA 160,64,64,96,255,
   126,170,170
50 DATA 160,177,177,254,
```

```
252,68,68,252
60 DATA 0,0,255,0,0,0,0,
   0
70 DATA 5,141,141,127,66
   ,34,34,126
80 DATA 5,2,2,134,255,
   126,85,85
90 DATA 24,24,60,60,126,
   126,24,24
```

Also, I think line 170 was omitted:

```
170 POKE USR "a"+6,
   BIN 01111110
```

This program makes a very nice display. I am particularly impressed with the house. I like a blue background better than a black one. I find that my best screen is obtained by coming from the monitor output on the 2068 to the video input of my VCR, which is connected to a Heathkit GR-2001 25" NTSC television.

M. J. Busby
Katy, TX

Dear Marilyn,

The format you suggest is indeed much simpler, provided the user has the proper decimal equivalents of the binary numbers which you provided.

The user now has two choices. The advantage of using the BIN command is that the graphic character can actually be visualized by

simply looking at the program lines. A representation of a smiley face can be seen in the eight following binary numbers:

```
0 0 1 1 1 1 0 0
0 1 1 1 1 1 1 0
1 0 0 1 1 0 0 1
1 1 1 1 1 1 1 1
1 0 1 1 1 1 0 1
1 1 0 1 1 0 1 1
0 1 1 0 0 1 1 0
0 0 1 1 1 1 0 0
```

Of course, as you infer, using the BIN command requires many more programming lines. For those of you who want to use Marilyn's method, simply make an 8 by 8 grid and in the squares you want dark, enter a "1". In the non-darkened squares, enter a "0". You now have eight, 8 digit binary numbers, each of which has to be converted to decimal which is really quite simple. Let us convert the first one in the smiley face which is 00111100. We can consider each of the eight positions in the number, a power of "2". This is easily visualized by observing the following format:

128:64:32:16: 8: 4: 2: 1

0 0 1 1 1 1 0 0

All we do now is add up any of the above numbers that has a "1" below it - so we get 32 + 16 + 8 + 4 which of course equals 60.

What the BIN command does, is to add them up for you - Ed.

(Color cont.)

to change from true video to inverse independent of a program routine.

The INK, PAPER and BORDER commands, followed by the color code number, will color the characters, background and screen border, respectively - Ed.

(QL cont.)

and the fierce price wars encountered in the U.S.

This could pose a serious problem for the future of the Timex Sinclair computers in general. Timex, with their non-TV advertising approach to computer marketing has not received the expected sales with the 2068 and has all but dropped the 1500 line. The 2068 is a wonderful computer but without proper exposure, future sales are uncertain. Don't be suprised if in a few months the Timex computers go the way of the TI 99/4A.

Also look for the Coleco Adam to fold. Word has it that the Adam has almost a 100 % return rate for various problems - Ed.

(This month's programs cont.)

are as follows:

- Shift arrow moves the cursor one space in the arrow's direction.

- Shift B brings cursor to beginning of text

- Shift N brings cursor to end of text

- Shift Y brings cursor 8 spaces to the right

- Shift I inserts one blank space to the right of the cursor and pushes the remaining text to the right

- Shift D deletes one character to the right of the cursor and pulls all the remaining text to the left

- Shift E returns to the menu

The keyword search mode from the menu allows printout.

207-242
"BULLETIN" LT = 2:10 RT = 7:47

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